

CLAIMS:

1. An electromagnetic relay comprising:

a base,

an electromagnet disposed on said base,

5 an armature supported rotatably by said base so as to swing in response to excitation/non-excitation of said electromagnet,

a movable spring whose one end has a movable contact and the opposite end is secured to said base,

10 a fixed contact disposed opposite to said movable contact to constitute a contact mechanism together with said movable contact,

a card having a coupling part to be coupled to said armature and an insertion hole to which said one end of said movable spring is inserted, said card elastically deforming said movable spring in conjunction with a swing motion of said armature to selectively open or close the contact mechanism,

15 wherein

said movable spring has a U-shaped hook formed by bending said one end of the movable spring toward the opposite end side, said one end of the movable spring being configured to be able to pass through said insertion hole while being pushed by an inner surface of said insertion hole and being deformed elastically, an end of said hook being engaged with said card.

2. The electromagnetic relay as set forth in claim 1, wherein

said card has a recess in the inner surface of said insertion hole, said recess running along an axial direction of said insertion hole so that said one end of the movable spring pushed by the inner surface of the insertion hole and elastically deformed in passing through the insertion hole can escape to said recess.

3. The electromagnetic relay as set forth in claim 2, wherein

said movable spring has slits on both sides of said hook.

4. The electromagnetic relay as set forth in claim 1, wherein
said card has a step on the inner surface of said insertion hole,
said end of the hook being engaged with a surface of said step opposite to a side from
which said one end of the movable spring is inserted.

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5. The electromagnetic relay as set forth in claim 4, wherein
a surface of said step on the side from which said one end of the movable spring is
inserted is inclined toward an inside of said insertion hole.

10 6. The electromagnetic relay as set forth in claim 1, wherein
said movable spring has a shoulder part for supporting a surface of said card on a side
from which said one end of the movable spring is inserted, said shoulder part being formed
into a U-shape by bending a part of said movable spring toward said the opposite end side.

15 7. An electromagnetic relay comprising:
a base,
an electromagnet disposed on said base,
an armature supported rotatably by said base so as to swing in response to
excitation/non-excitation of said electromagnet,

20 a plurality of movable springs, one end of each of said movable springs having a
movable contact and the opposite end of each of them being secured to said base,
a plurality of fixed contacts, each of said fixed contacts being disposed opposite
to each of said movable contacts to constitute a contact mechanism together with the
corresponding movable contact,

25 a card having a coupling part to be coupled to said armature and a plurality of
insertion holes to which the one end of each of said movable springs is inserted, said card
elastically deforming said movable springs in conjunction with a swing motion of said
armature to selectively open or close the contact mechanisms,
wherein

30 each of said movable springs has a U-shaped hook formed by bending said one

end of each of the movable springs toward the opposite end side, said one end of each of the movable springs being configured to be able to pass through said insertion hole while being pushed by an inner surface of said insertion hole and being deformed elastically,

5 said insertion holes comprising a first insertion hole and a second insertion hole,

 said first insertion hole having a step on an inner surface thereof and said hook of said movable spring inserted into the first insertion hole being engaged with a surface of said step opposite to a side from which said one end of the movable spring is inserted,

10 said second insertion hole having no step to which said hook of each of said movable springs is engaged and said card being not restrained by said hook inserted into said second insertion hole.